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# United States Patent [19]

## Bales et al.

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## [54] RADIAL JAW BIOPSY FORCEPS

[75] Inventors: Thomas O. Bales, Coral Gables;  
Charles R. Slater, Fort Lauderdale;  
Kevin W. Smith, Miami, all of Fla.

[73] Assignee: Symbiosis Corporation, Miami, Fla.

[\*] Notice: This patent is subject to a terminal disclaimer.

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## Related U.S. Application Data

[63] Continuation of application No. 08/458,215, Jun. 2, 1995, Pat. No. 5,666,965, which is a continuation of application No. 07/837,046, Feb. 18, 1992, Pat. No. 5,507,296, which is a continuation of application No. 07/521,766, May 10, 1990, Pat. No. 5,133,727.

[51] Int. Cl.<sup>7</sup> ..... A61B 17/28; A61B 10/00

[52] U.S. Cl. .... 600/564

[58] Field of Search ..... 600/562-568;  
606/167-171, 205-210

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Primary Examiner—Samuel Gilbert

Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

## [57] ABSTRACT

A biological forceps device for the taking of tissue samples from a body, comprising a flexible main coil attached at its distal end to a pair of homologous cast jaws. The jaws have radially arranged teeth on their distalmost end. The jaws are opened and closed by attachment to a pair of pull wires which extend through the main coil, into a handle at its proximal end. The handle has a spool which slides about a central shaft attached to the main coil. The spool is attached to the pull wires, so that movement of the spool with respect to the central shaft, effectuates a force on the proximal ends of the levered jaws, to open and close them, appropriately.

32 Claims, 3 Drawing Sheets

